

SEMICONDUCTOR RING LASER GYRO

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Abstract of JP60148185

PURPOSE:To miniaturize and lighten the titled gyro, to reduce power consumption and to improve reliability by forming the ring laser gyro consisting of a semiconductor laser with a ring type resonator, a waveguide and a Y type coupling element on a semiconductor substrate as one chip. **CONSTITUTION:**An InP clad layer 32, a non-doped InGaAsP active layer 33 and an InP clad layer 34 are grown on an InP substrate 31 in an epitaxial manner in succession. The active layer 33 is brought to thickness of 0.1-0.3 μ m in order to lower a threshold at that time. An oxide 35 patterned as an etching mask is formed to the substrate, and a ring-shape resonator section, a waveguide section and a Y coupling section are etched through a normal photolithography technique. A crystal is grown while using the oxide 35 as a mask.

